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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,087	09/28/2004	Nozomu Sugo	258970US0XPCT	9940

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EXAMINER	
MCCRACKEN, DANIEL	
ART UNIT	**PAPER NUMBER**
1793	

NOTIFICATION DATE	DELIVERY MODE
01/11/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/509,087	SUGO ET AL.	
	Examiner	Art Unit	
	Daniel C. McCracken	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Citation to the Specification will be in the following format (S. # : L) where # denotes the page number and L denotes the line number. Citation to patent literature will be in the form (Inventor # : LL) where # is the column number and LL is the line number. Citation to the pre-grant publication literature will be in the following format (Inventor # : ¶) where # denotes the page number and ¶ denotes the paragraph number.

Information Disclosure Statement

The Examiner has considered the relevance of all foreign patent documents insofar as the translated abstract indicates. "The duty of candor does not require that the applicant translate every foreign reference, but only that the applicant refrain from submitting partial translations and concise explanations that it knows will misdirect the examiner's attention from the reference's relevant teaching." *Semiconductor Energy Laboratory Co. v. Samsung Electronics Co.*, 204 F.3d 1368, 1378, 54 USPQ2d 1001 1008 (Fed. Cir. 2000).

Specification

A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the number of amendments to the specification needed to correct all of the deficiencies would make it difficult to consider the application.

A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

The Specification suffers from poor diction, syntax, and grammatical form, possibly from a machine translation from Japanese. For example, Applicants state:

> In recent years, electric double-layer capacitors are garnering attention as backup power sources and auxiliary power sources, and *development is being widely conducted* with attention given to the performance of activated carbon as the electrodes of an electric double-layer capacitor.

(S. 1: 20-25) (emphasis added, noting the use of the passive voice). If this sentence reads well in Japanese, it does not read well in English. This example was found on the first page of the specification. Other instances of this "style" of writing may be found in the specification. Appropriate correction is expected.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to Claim 7, the equation recited is without dimensions. The product of pressure and the "temperature rise rate" is not dimensionless. As such, the claim has no meaning and should be cancelled or amended to mean something. Citation to the Specification is expected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The entire reference teaches each and every limitation of the rejected claims. The pinpoint citations provided are in no way to be construed as limitations of the teachings of the reference, but rather illustrative of particular instances where the teachings may be found.

Claims 1-37 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/13390 to Fujino, et al. US 7,214,646 B1 will be treated as a translation to which citations shall be made.

With respect to Claim 1, Fujino recites a process for making an activating carbon comprising mixing mesophase pitch (i.e. a carbonaceous material) with potassium hydroxide (KOH). See generally (Fujino 5: 18 et seq; "KOH" recited at 5:65 et seq.). Pulverizing (i.e.

granulating) is taught. (Fujino 5: 19). Heating (i.e. dehydrating) is taught. (Fujino 5:18 et seq.). Activation is taught. Id. As to Claim 2, the temperature is greater than 80C. Id. As to Claim 4, Fujino discloses particle sizes smaller than 50 mm. See (Fujino "Figs. 5-6"). As to Claim 5, the dehydrating temperature is taught. (Fujino 5: 18 et seq.). As to Claim 7, given the ambiguities noted in the 112 ¶2, it is expected that whatever pressure may be recited in Fujino, it could be expressed in some manner of units that would be less than 15. As to Claims 8-9, mesophase carbon pitch is taught. (Fujino 15: 43-50). As to Claims 11-12, given the "pulverizing" treatments recited, it is expected that the sizes claimed are present. *See* (Fujino 5: 17-33). As to Claim 13, KOH is taught. (Fujino 5: 65 *et seq.*). As to Claim 14, thew ratio is taught. *Id.* As to Claims 15-19, the activating temperatures and times are taught. (Fujino "Col. 5," 12: 29 *et seq.*). As to Claims 20-23, the ability to heat in inert atmospheres (*see e.g.* Fujino 5: 26) necessarily recites the use of a kiln. As to Claim 24, it is expected – given that the process and materials used appear to be identical - that the crushing strength of the product is taught. "[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)). As to Claims 25-27, the ratios of KOH are taught. (Fujino 5: 65 *et seq*; "Tables 4-5").

With respect to Claims 28-37, it is noted that these claims are drafted in product-by-process format. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process

claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted). *See also* MPEP 2113, *et seq*. Thus, with respect to Claims 28-31, activated carbons, "dehydration products," electrodes, etc. (which is all that the claim requires), are clearly taught. (Fujino 2: 1 *et seq*.). As noted above, the process limitations (while having absolutely no relevance to patentability) are taught. It is further noted that iron and nickel is explicitly taught over a range of 0.1-10 wt% (Fujino 8: 43 *et seq*) and density and capacitance values claimed are recited. (Fujino "Table 1"). As to Claim 35, a "double layer" capacitor is taught. *See* (Fujino "Title"). Finally, with respect to any claims that express esoteric properties (e.g. Claims 30, 37) it is expected - owing to the identical process - that these properties are present. *See above* with respect to inherency burden shifting.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The entire reference teaches each and every limitation of the rejected claims. The pinpoint citations provided are in no way to be construed as limitations of the teachings of the reference, but rather illustrative of particular instances where the teachings may be found. As to the rejection under 35 U.S.C. §§ 102/103, where the applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, or claims products by way of the process it was made, the Examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. *See* MPEP 2112 III. (discussing 102/103 rejections).

With respect to the third *Graham v. Deere* inquiry, the Examiner resolves the level of ordinary skill in the art to be very high, presumably a PhD level chemist or chemical engineer with extensive experience in the activated carbon art. This finding may be buttressed by the references of record, as well as those provided by Applicants on their multiple information disclosure statements. It is further noted that one of ordinary skill in the art will have a wide

knowledge of multiple arts, owing to the cross-disciplinary nature of the field (i.e. using "chemistry" to make an "electrical" product). This finding is made once for brevity's sake and is expressly incorporated into each and every rejection below, where necessary.

Claims 1-37 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 01/13390 to Fujino, et al. (US 7,214,646 B1 will be treated as a translation to which citations shall be made.)

The discussion accompanying the anticipation rejection *supra* is expressly incorporated herein by reference. *See above* with respect to 102/103 rejections.

Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/13390 to Fujino, et al. (US 7,214,646 B1 will be treated as a translation to which citations shall be made.).

With respect to Claims 1-11, selection of the carbon material and the sizes to which it is ground to is well within the ordinary skill in the art. Fujino would suggest that any number of starting materials is acceptable. (Fujino 15: 43-50). Similarly, control of the size of the carbonaceous material by granulating is well within the skill in the art, as indicated by the pulverizing and the need to incorporate various additives (KOH, NaOH, etc.) in the mix. *See* (Fujino 2: 28). Further, it would be obvious to granulate/palletize to make any number of products, for example a monolith. Treatment at reduced pressures is within the skill in the art. As to Claims 15-19, to the extent Fujino may not recite the heating rates or temperatures as claimes,

Fujino clearly teaches the effect of temperature and the heating rate on activation. (Fujino 12: 29-42). Stated differently, temperature and heating rates are result-effective variables, readily optimized by the skilled artisan. *See In re Boesch*, 205 USPQ 215, 219 (CCPA 1980). With respect to Claim 20, to the extent Fujino may not recite *in haec verba* a "kiln" for heating, one of ordinary skill in the art would recognize kilns/ovens as suitable, even desirable heating means. As to Claim 21, to the extent Fujino may recite a batch versus continuous process, making a process continuous is prima facie obvious. *In re Dilnot*, 138 USPQ 248 (CCPA 1963). As to Claims 25-27, to the extent Fujino may not recite the ranges claimed, Fujino discloses the effect of a range of KOH values on any number of variables. (Fujino "Table 5, Fig. 16"). Optimization does not impart patentability. *In re Boesch*, 205 USPQ at 219. Similarly, with respect to Claims 32-34, optimization of metal content does not impart patentability. *See* (Fujino 9: 1 *et seq.*) (discussing the effect of metal).

Claims 38-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/13390 to Fujino, et al. (US 7,214,646 B1 will be treated as a translation to which citations shall be made.)

The preceding discussions of Fujino (102 and 103 rejections) are expressly incorporated herein by reference and relied upon for teaching or rendering obvious those limitations discussed above. With respect to Claim 38, Fujino reasonably suggests some sort of pressure treatement (1:54 *et seq*) (discussing laminated-type and rolled type electrodes). To the extent that it does not recited this treatment *in haec verba* and to the extent that one of ordinary skill in the art (which is very high) would not know how to make the electrode, the Examiner is taking official notice that

hot pressing in the electrode art is old and known and well within the skill of one of ordinary skill in the art. In support of taking official notice (i.e. to make sure there is "substantial evidence" on the record – *see* MPEP 2144.03), the Examiner cites to the following:

1. US 6,118,650 to Maeda – roll molding described as "conventional" at 9:54 *et seq.*
2. US 4,612,689 to de Wild, et al. – hot pressing described at, *e.g.* 4: 59 *et seq.*
3. US 5,540,974 to Hoseki, et al. - hot pressing described as "ordinary" at 8: 65
4. US 6,426,865 to Kasahara, et al. – hot pressing described at, *e.g.* 3: 49
5. US 5,646,815 to Owens – hot pressing described as "conventional" at 6: 39 *et seq.*

This is but a sampling. Optimizing that which is old and known does not impart patentability. MPEP 2144.05.

Conclusion

All amendments made in response to this Office Action must be accompanied by a pinpoint citation to the Specification (i.e. page and paragraph or line number) to indicate where Applicants are drawing their support. Applicants IDS is considered relevant to their disclosure. Arguably, more rejections could have been made, but were considered cumulative to that of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel C. McCracken whose telephone number is (571) 272-6537. The examiner can normally be reached on Monday through Friday, 9 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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